[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0492; Directorate Identifier 2010-NM-126-AD; Amendment

39-17209; AD 2012-20-03]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for certain The Boeing Company Model 747 airplanes. That AD currently requires repetitive visual inspections around the bushings of the wing landing gear (WLG) beam outboard end fittings for corrosion, and rework if necessary; and ultrasonic inspections for cracks of the outboard end fittings of the WLG support beams, and rework if necessary. This new AD adds airplanes and adds repetitive inspections of the outboard end fitting of the left and right WLG support beams for cracks and corrosion, and corrective actions if necessary. This AD was prompted by new reports of corrosion damage to the end fittings of the WLG support beams, and one report of subsequent cracking in the end fittings. We are issuing this AD to detect and correct corrosion and subsequent cracking in the outboard end fittings, which could result in separation of the fitting and damage to adjacent flight control cables and hydraulic systems and consequent reduced controllability of the airplane.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; Internet https://www.myboeingfleet.com. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6432; fax: (425) 917-6590; email: bill.ashforth@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989). That AD

applies to the specified products. The NPRM published in the <u>Federal Register</u> on May 31, 2012 (77 FR 32064). That NPRM proposed to continue to require repetitive visual inspections around the bushings of the wing landing gear (WLG) beam outboard end fittings for corrosion, and rework if necessary; and ultrasonic inspections for cracks of the outboard end fittings of the WLG support beams, and rework if necessary. That NPRM also proposed to add airplanes and repetitive inspections of the outboard end fitting of the left and right WLG support beams for cracks and corrosion, and corrective actions if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 32064, May 31, 2012) and the FAA's response to each comment.

Request to Change Certain Language in Paragraph (s) of the NPRM (77 FR 32064, May 31, 2012)

Boeing asked that the following sentence be added to paragraph (s) of the NPRM (77 FR 32064, May 31, 2012): "After accomplishing the repair or change in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, do the applicable actions required by paragraph (r) of this AD." Boeing stated that the follow-on inspections are required after accomplishing the repair or replacement in Part 7. Boeing added that paragraph (q) of the NPRM contains a similar requirement for Groups 1 through 5 airplanes.

We partially agree with the commenter. We agree that the language specified in paragraphs (q) and (s) of the NPRM (77 FR 32064, May 31, 2012) is inconsistent. However, we do not agree to include the additional sentence in paragraph (s) of this final rule because it would continue to restate redundant information, and may further confuse operators. Therefore, we have removed ". . . do the applicable actions required by

paragraph (p) of this AD," as was specified in paragraph (q) of the NPRM, in order to provide consistency between those related paragraphs.

Request to Include Certain Part Numbers (P/Ns) in the NPRM (77 FR 32064, May 31, 2012)

Qantas Airways (QAN) asked that the NPRM (77 FR 32064, May 31, 2012) be reviewed to accurately capture all approved part numbers for end fitting replacements. QAN stated that, for its Model 747-400 Configuration 6 airplanes, Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, specifies that if a replacement spare end fitting is required, an end fitting assembly having P/N 112U1701-1 is to be used for that replacement. QAN noted that the parts page inventory list from the original equipment manufacturer (OEM) shows that P/N 112U1701-1 is no longer available and has been replaced with P/N 112U2701-7. QAN also noted that P/N 65B14473-23 and P/N 65B14473-24 are no longer available and have been replaced by P/N 65B14473-33 and P/N 65B14473-34, respectively. QAN added that these replacement parts are not identified in the referenced service information. QAN also stated that, if any of the replacement parts are used, it will be forced to request an alternative method of compliance (AMOC) from the OEM to approve the use of an alternate part in order to comply with the AD requirements.

We acknowledge the commenter's concerns. However, as specified in the NPRM (77 FR 32064, May 31, 2012), since issuance of AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989), corrosion occurred again at the lug bore and bushing interface because moisture continued to develop in that area due to exposure of the end fittings to environmental conditions. Subsequently, cracks occurred at the corroded areas of the end fittings; therefore, the unsafe condition specified in the existing AD has not been corrected. We find that issuing this AD without further delay is necessary to adequately address the identified unsafe condition. Operators may submit a request for approval of

the replacement part numbers (P/Ns) through an AMOC, as specified in paragraph (u) of the AD. We have not changed the AD in this regard.

Request to Change Certain Paragraph Identifiers in the NPRM (77 FR 32064, May 31, 2012)

Boeing and Atlas Air asked that the paragraph identifier in the last sentence in paragraph (I) of the NPRM (77 FR 32064, May 31, 2012) be changed from paragraph (j) to paragraph (p). Boeing and Atlas Air stated that paragraph (j) of the NPRM would not be applicable since it applies to inspections of the end fittings prior to accomplishing the repair or replacement in Part 7 of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. Atlas Air added that paragraph (p) of the NPRM defines the procedures for follow-on end fitting inspections on which the repair or replacement specified in Part 7 has been done.

Boeing, Atlas Air, and UPS asked that the paragraph identifier in the last sentence in paragraph (n) of the NPRM (77 FR 32064, May 31, 2012) be changed from paragraph (m) to paragraph (r). Boeing, Atlas Air, and UPS stated that paragraph (m) of the NPRM applies to inspections of the end fittings prior to accomplishing the repair or replacement in Part 7 of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. Atlas Air added that paragraph (r) of the NPRM defines the procedures for follow-on end fitting inspections on which the repair or replacement specified in Part 7 has been done.

We agree with the commenters for the reasons provided. We have changed the paragraph identifiers in paragraphs (1) and (n) of this AD accordingly.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Explanation of Change to Costs of Compliance

Since issuance of AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989), we have increased the labor rate used in the Costs of Compliance from \$40 per work-hour to \$85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified labor rate.

Costs of Compliance

We estimate that this AD affects 173 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections [retained actions from existing AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989)]	10 work-hours X \$85 per hour = \$850 per inspection cycle	\$0	\$850 per inspection cycle	\$147,050 per inspection cycle
Inspections [new action]	Up to 67 work- hours X \$85 per hour = \$5,695 per inspection cycle, depending on configuration	\$0	Up to \$5,695 per inspection cycle, depending on configuration	Up to \$985,235 per inspection cycle, depending on configuration

We estimate the following costs to do any necessary repairs/replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these repairs/replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repair or replacement	Up to 71 work- hours X \$85 per hour = \$6,035, depending on configuration	Up to \$26,436, depending on configuration	Up to \$32,471, depending on configuration

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989), and adding the following new AD:

2012-20-03 The Boeing Company: Amendment 39-17209; Docket

No. FAA-2012-0492; Directorate Identifier 2010-NM-126-AD.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989).

(c) Applicability

This AD applies to The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D,

747-400F, 747SR, and 747SP series airplanes; certificated in any category; as identified in Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by new reports of corrosion damage to the end fittings of the wing landing gear (WLG) support beams, and one report of subsequent cracking in the end fittings. We are issuing this AD to detect and correct corrosion and subsequent cracking in the outboard end fittings, which could result in separation of the fitting and damage to adjacent flight control cables and hydraulic systems and consequent reduced controllability of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Retained Repetitive Inspections with Revised Compliance Times

This paragraph restates the requirements of paragraphs A., B., C., and D., of AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989) with revised compliance times. For airplanes identified in Boeing Service Bulletin 747-57-2244, Revision 1, dated July 28, 1988: Prior to the accumulation of 30,000 flight hours or 8 years in service, whichever occurs first; or within the next 14 months after August 22, 1989 (the effective date of AD 89-15-07); whichever occurs later; visually inspect around the fitting lug bushings at the WLG beam outboard end fittings for corrosion, and ultrasonically inspect the WLG beam outboard end fittings for cracks, in accordance with Boeing Service Bulletin 747-57-2244, Revision 1, dated July 28, 1988. Accomplishing

the initial inspections required by paragraph (j) of this AD terminates the inspections required by this paragraph.

- (1) If no cracking or corrosion is found, repeat the inspections at intervals not to exceed 18 months until paragraph (j) of this AD has been accomplished.
- (2) If cracking is found, prior to further flight, remove the WLG beam outboard fitting, and rework, in accordance with Boeing Service Bulletin 747-57-2244, Revision 1, dated July 28, 1988.
- (3) If only corrosion is found, within the next 12 months, rework in accordance with Boeing Service Bulletin 747-57-2244, Revision 1, dated July 28, 1988. The ultrasonic inspections for cracks required by paragraph (g) of this AD must be accomplished at intervals not to exceed 6 months until the rework is accomplished. For any corrosion that is found after the effective date of this AD, the rework must be done before further flight.

(h) Retained Terminating Action

This paragraph restates the requirements of paragraph E., of AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989). Terminating action for the inspections required by paragraph (g) of this AD consists of rework of the WLG beam outboard fittings, in accordance with Boeing Service Bulletin 747-57-2244, Revision 1, dated July 28, 1988.

(i) New Compliance Times for This AD

For all the actions identified in paragraphs (j) through (t) of this AD, do the actions at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. Where paragraph 1.E., "Compliance" of this service bulletin specifies a compliance time relative to the original issue date of the service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(j) New Repetitive Inspections for Groups 1 through 5 Airplanes

For Groups 1 through 3 airplanes, Configurations 1 and 2; and Groups 4 and 5 airplanes: Do detailed and ultrasonic inspections of the end fittings for cracks and corrosion, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(k) New Inspections for No Crack or Corrosion Findings for Groups 1 through 5 Airplanes

If no crack or corrosion is found during any inspection required by paragraph (j) of this AD, do either of the actions required by paragraph (k)(1) or (k)(2) of this AD.

- (1) Repeat the detailed and ultrasonic inspections of the end fittings for cracks and corrosion, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (2) Do a detailed inspection of the end fittings for fillet seal damage and for cracks and corrosion, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (i) If no fillet seal damage, crack, or corrosion is found: Repeat the inspection required by paragraph (k)(2) of this AD.
- (ii) If any fillet seal damage is found, but no crack or corrosion is found: Remove the fillet seal, and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (A) If any crack or corrosion is found: Repair or change the end fitting, in accordance with paragraph (l) of this AD.
- (B) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 3

of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

- (1) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, and thereafter repeat the inspections required by paragraph (k)(2)(ii)(B) of this AD.
- (2) If any crack or corrosion is found: Repair or change the end fitting, in accordance with paragraph (1) of this AD.

(l) New Repair for Crack or Corrosion Findings for Groups 1 through 5 Airplanes

If any crack or corrosion is found during any inspection required by paragraph (j) or (k) of this AD: Repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. After accomplishing the repair or change in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, do the applicable actions required by paragraph (p) of this AD.

(m) New Repetitive Inspections and Corrective Actions for Group 6 Airplanes

For Group 6 airplanes: Do a detailed inspection of the end fittings for fillet seal damage and for cracks and corrosion, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

- (1) If no fillet seal damage, crack, or corrosion is found: Do the detailed inspection of the end fittings for fillet seal damage and for cracks and corrosion, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (i) If no fillet seal damage, crack, or corrosion is found: Repeat the detailed inspection required by paragraph (m)(1) of this AD.

- (ii) If any fillet seal damage is found, but no crack or corrosion is found: Remove the fillet seal, and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (A) If any crack or corrosion is found: Repair or change the end fitting, in accordance with paragraph (n) of this AD.
- (B) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (1) If any crack or corrosion is found: Repair or change the end fitting, in accordance with paragraph (n) of this AD.
- (2) If no crack or corrosion is found: Apply corrosion inhibiting compound, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, and thereafter repeat the inspections required by paragraph (m)(1)(ii)(B) of this AD.
- (2) If any fillet seal damage is found, but no crack or corrosion is found: Remove the fillet seal, and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (i) If any crack or corrosion is found: Repair or change the end fitting, in accordance with paragraph (n) of this AD.
- (ii) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 1 of the Accomplishment Instructions of Boeing

Alert Service Bulletin 747-57A2331, dated November 12, 2009; and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

- (A) If any crack or corrosion is found: Repair or change the end fitting, in accordance with paragraph (n) of this AD.
- (B) If no crack or corrosion is found: Apply corrosion inhibiting compound, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, and thereafter repeat the inspections required by paragraph (m)(2)(ii) of this AD.

(n) New Repair for Group 6 Airplanes

If any crack or corrosion is found during any inspection required by paragraph (m) of this AD: Repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. After accomplishing the repair or change in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, do the applicable actions required by paragraph (r) of this AD.

(o) New Optional Terminating Action for Part 1, Part 2, and Part 3 Inspections

In lieu of doing Part 1, Part 2, or Part 3 inspections required by this AD: Repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. After accomplishing the repair or change in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, do the applicable actions required by paragraphs (p) and (r) of this AD. Doing the repair or change terminates the Part 1, 2, or 3 inspections for that part only of the

Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(p) New Follow-On End Fitting Inspection for Groups 1 through 5 Airplanes

For Groups 1 through 5 airplanes on which the repair or change specified in Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, has been done: Do detailed and ultrasonic inspections of the end fittings for cracks and corrosion, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. If no crack or corrosion is found, do the actions required by either paragraph (p)(1) or (p)(2) of this AD.

- (1) Repeat the detailed and ultrasonic inspections of the end fittings for cracks and corrosion required by paragraph (p) of this AD.
- (2) Do a detailed inspection of each end fitting for fillet seal damage, cracks, and corrosion, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (i) If no fillet seal damage, crack, or corrosion is found: Repeat the inspection required by paragraph (p)(2) of this AD.
- (ii) If any fillet seal damage is found, but no crack or corrosion is found: Remove the fillet seal, and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (A) If any crack or corrosion is found: Repair or change the end fitting, as required by paragraph (q) of this AD.
- (B) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and do detailed and

HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

- (1) If any crack or corrosion is found: Repair or change the end fitting, as required by paragraph (q) of this AD.
- (2) If no crack or corrosion is found: Apply corrosion inhibiting compound, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and repeat the detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(q) New Repair for Groups 1 through 5 Airplanes

If any crack or corrosion is found during any inspection required by paragraph (p) of this AD, repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(r) New Follow-On End Fitting Inspection for Group 6 Airplanes

For Group 6 airplanes on which the repair or change specified in Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, has been done: Do a detailed inspection of the end fittings for fillet seal damage, cracks, and corrosion, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(1) If no fillet seal damage, crack, or corrosion is found: Do a detailed inspection of each end fitting for fillet seal damage, cracks, and corrosion, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

- (i) If no fillet seal damage, crack, or corrosion is found: Repeat the inspection required by paragraph (r)(1) of this AD.
- (ii) If any fillet seal damage is found, but no crack or corrosion is found: Do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (A) If any crack or corrosion is found: Repair or change the end fitting as required by paragraph (s) of this AD.
- (B) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and repeat the detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (1) If any crack or corrosion is found: Repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (2) If no crack or corrosion is found: Apply corrosion inhibiting compound, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and repeat the detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (2) If any fillet seal damage is found, but no crack or corrosion is found: Do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance

with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

- (i) If any crack or corrosion is found: Repair or change the end fitting, as required by paragraph (s) of this AD.
- (ii) If no crack or corrosion is found: Apply corrosion inhibiting compound on each end fitting, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and do detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
- (A) If any crack or corrosion is found: Repair or change the end fitting, as required by paragraph (s) of this AD.
- (B) If no crack or corrosion is found: Apply corrosion inhibiting compound, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009; and repeat the detailed and HFEC inspections of each end fitting for cracks and corrosion, in accordance with Part 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(s) New Repair for Group 6 Airplanes

If any crack or corrosion is found during any inspection required by paragraph (r) of this AD, repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.

(t) New Optional Action for Part 4, Part 5, and Part 6 Inspections

In lieu of doing Part 4, Part 5, or Part 6 inspections required by this AD: Repair or change the end fitting, in accordance with Part 7 of the Accomplishment Instructions of

Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009. After accomplishing the repair or change in accordance with Part 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009, do the applicable actions required by paragraphs (p) and (r) of this AD.

(u) Alternative Methods of Compliance (AMOCs)

- (1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.
- (2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.
- (3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.
- (4) AMOCs approved previously in accordance with AD 89-15-07, Amendment 39-6267 (54 FR 30009, July 18, 1989), are approved as AMOCs for the corresponding requirements of this AD.

(v) Related Information

- (1) For more information about this AD, contact Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6432; fax: (425) 917-6590; email: bill.ashforth@faa.gov.
- (2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; Internet https://www.myboeingfleet.com. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(w) Material Incorporated by Reference

- (1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.
- (2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.
 - (i) Boeing Alert Service Bulletin 747-57A2331, dated November 12, 2009.
 - (ii) Boeing Service Bulletin 747-57-2244, Revision 1, dated July 28, 1988.
- (3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com.
- (4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

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Ali Bahrami, Manager, Transport Airplane Directorate, Aircraft Certification Service.

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